SYSTEMS AND METHODS FOR BANDWIDTH SHAPING

ABSTRACT OF THE DISCLOSURE

[0083]   Systems and methods for controlling access by a set of agents to a resource, where the agents have corresponding priorities associated with them, and where a monitor associated with the resource controls accesses by the agents to the resource based on the priorities. One embodiment is implemented in a computer system having multiple processors that are connected to a processor bus. The processor bus includes a shaping monitor configured to control access by the processors to the bus. The shaping monitor attempts to distribute the accesses from each of the processors throughout a base period according to priorities assigned to the processors. The shaping monitor allocates slots to the processors in accordance with their relative priorities. Priorities are initially assigned according to the respective bandwidth needs of the processors, but may be modified based upon comparisons of actual to expected accesses to the bus.